

CLAIMS

Sub a1  
1. A gram-positive microorganism having a mutation or deletion of part or all of one or more of the genes encoding a serine protease selected from the group consisting of SP1, SP2, SP3, SP4 and SP5 said mutation or deletion resulting in the inactivation of the SP1, SP2, SP3, SP4 or SP5 proteolytic activity.

Sub B2  
2. The gram-positive microorganism according to Claim 1 that is a member of the family *Bacillus*.

3. The microorganism according to Claim 2 wherein the member is selected from the group consisting of *B. licheniformis*, *B. lentus*, *B. brevis*, *B. stearothermophilus*, *B. alkalophilus*, *B. amyloliquefaciens*, *B. coagulans*, *B. circulans*, *B. lautus* and *Bacillus thuringiensis*.

4. The microorganism of Claim 1 wherein said microorganism is capable of expressing a heterologous protein.

Sub B3  
5. The microorganism of Claim 4 wherein said heterologous protein is selected from the group consisting of hormone, enzyme, growth factor and cytokine.

6. The microorganism of Claim 5 wherein said heterologous protein is an enzyme.

Sub B4  
7. The microorganism of Claim 6 wherein said enzyme is selected from the group consisting of a proteases, carbohydrases, and lipases; isomerases such as racemases, epimerases, tautomerases, or mutases; transferases, kinases and phosphatases.

8. A cleaning composition comprising a serine protease selected from the group consisting of SP1, SP2, SP3, SP4 and SP5.

Sub a2  
9. An expression vector comprising nucleic acid encoding a serine protease selected from the group consisting of SP1, SP2, SP3, SP5 and SP5.

Sub B6  
10. A host cell comprising an expression vector according to Claim 9

Sub a3  
11. A method for the production of a heterologous protein in a *Bacillus* host cell comprising the steps of

(a) obtaining a *Bacillus* host cell comprising nucleic acid encoding said heterologous protein wherein said host cell contains a mutation or deletion in at least one of the genes encoding serine protease 1, serine protease 2 serine protease 3; serine protease 4 and serine protease 5.

(b) growing said *Bacillus* host cell under conditions suitable for the expression of said heterologous protein.

*Sub a3 cont*  
*Rule 126*  
*12*  
13. The method of Claim 11 wherein said *Bacillus* cell is selected from the group consisting of *Bacillus subtilis*, *B. licheniformis*, *B. lentus*, *B. brevis*, *B. stearothermophilus*, *B. alkalophilus*, *B. amyloliquefaciens*, *B. coagulans*, *B. circulans*, *B. lautus* and *Bacillus thuringiensis*.

*13*  
*14* 14. The method of Claim 13 wherein said *Bacillus* host cell further comprises a mutation or deletion in at least one of the genes encoding apr, npr, epr, wpr and mrp.

*14*  
*15* 15. A gram-positive microorganism having a mutation or deletion in at least one of the genes encoding a serine protease selected from the group consisting of serine protease 1, serine protease 2 serine protease 3; serine protease 4 and serine protease 5.

*15*  
*16* 16. The microorganism of Claim 16 further comprising a mutation or deletion in at least one of the genes encoding apr, npr, epr, wpr and mrp.

*add a4*